



DEPARTMENT OF TRANSPORTATION
MATERIALS TRANSPORTATION BUREAU
WASHINGTON, D.C. 20590

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Title 49—Transportation

CHAPTER I—MATERIALS TRANSPORTATION BUREAU, DEPARTMENT OF TRANSPORTATION

[Docket No. HM-139; Amdt. Nos. 172-38, 173-110, 176-3]

PACKAGING AND SHIPPING

Conversions of Individual Exemptions To Regulations of General Applicability

AGENCY: Materials Transportation Bureau, DOT.

ACTION: Final rule.

SUMMARY: This action is being taken to incorporate into the Department's Hazardous Materials Regulations a number of changes based on the data and analysis supplied in selected exemption applications, or from existing special permits and exemptions. The need for this action has been created by the public demand to make available new packaging and shipping alternatives that have proven themselves safe under the Department's special permit and exemption programs. The intended effect of amendments is to provide wider to the benefits of transportation regulations recognized and shown to be effective and safe.

EFFECTIVE DATE: November 7, 1977.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION: On August 8, 1977, the Materials Transportation Bureau (MTB) published a Notice of Proposed Rule Making, Docket HM-139; Notice 77-7 (42 FR 40003) which proposed these amendments. The background and the basis for incorporating these exemptions into the regulations were discussed in that notice. Interested persons were invited to give their views prior to the closing date of September 6, 1977. Primary drafters of this document are Darrell L. Raines and John C. Allen of the Office of Hazardous Materials Operations, Exemptions Branch, and George W. Tenley, Jr. of the Office of the Assistant General Counsel for Materials Transportation Law.

One commenter requested a change in the location and wording of the proposed change to § 176.800(a). The proposed change to that section is based on DOT-E 7782 which authorizes an exception to the segregation requirements for corrosive materials on cargo vessels when the corrosive materials are packaged in limited quantities and further packed in freight containers and further packed in transport vehicles. The commenter argues that such an exception to segregation requirements was authorized for all hazardous materials shipped by water prior to the consolidation of the hazardous materials regulations under Docket HM-103/112. Therefore, it is argued that this exception from segregation requirements should not be limited to corrosive materials shipped by water. Commenter suggests the amendment of § 176.80(b) to accommodate this. Based on a further evaluation of the proposed change and upon recommendations from the U.S. Coast Guard, the Bureau agrees with the commenter.

The amendment has been changed to § 176.80(b) to allow a general exception from the segregation requirements when any hazardous material is shipped by cargo vessel and the materials are packaged in limited quantities and further packed inside freight containers or highway vehicles.

Several changes from Notice 77-7 were initiated by the Bureau. The proposed amendment to § 173.65(a) failed to include the requirement for a 0.003-inch thick polyethylene liner to be inside the 17H and 37A drums for shipments of ammonium perchlorate. A sentence has been added requiring such a liner in the amendment to § 173.65(a).

The amendment to § 173.154(a)(4) includes authorization for certain tank motor vehicles to be used for certain oxidizers. However, the notice of proposed rule making failed to include the stipulation that only the MC 304 and MC 307 tank motor vehicles are authorized for carriage of these commodities by cargo vessel and this provision has been incorporated into the amendment to that paragraph.

An error was published in Notice 77-7 concerning the proposed amendment to eliminate DOT-E 6682 to authorize shipments of lithium metal foil in DOT-21C fiber drums. The notice cited the regulation affected to be § 173.308(a). The actual regulation affected and amended by this rule making is § 173.206(a)(13).

In addition to the substantive changes discussed above, an editorial change has

been made to paragraph (b) of § 176.80 to delete the reference to ORM-D materials. That reference is not necessary in light of the same provision in § 176.11(e).

Analysis of these amendments and comments thereon indicate that the costs of regulatory enforcement will not be significantly affected, nor will additional costs be imposed on the private sector, consumers, or Federal, State or local governments, since these amendments will authorize the general use of shipping alternatives previously available to only a few users under the exemptions. The safety record or analysis of shipments under the exemptions identified in Notice 77-7 demonstrate that significant environmental impacts will not result from any of these amendments. Since these amendments are relaxations of existing rules, and place no additional burden on any person, they are being made effective in less than 30 days after publication in the FEDERAL REGISTER.

In consideration of the foregoing, 49 CFR Parts 172, 173 and 176 are amended as follows:

PART 172—HAZARDOUS MATERIALS TABLE AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

1. § 172.100 paragraph (g)(3) is revised to read as follows:

§ 172.100 Purpose and use of the table.

(g)

(3) For flammable liquids, the net quantity limitation for carriage aboard a passenger-carrying aircraft or railcar is one gallon per package, and for cargo-only aircraft is 55 gallons per package, if:

(i) The material has a flash point of 73° F. or higher;

(ii) The material does not meet the definition of any other hazard class as defined in this part, and

(iii) The flash point, or an indication that the flash point is 73° F. or higher, is marked on the outside package.

§ 172.101 [Amended]

2. In § 172.101 the Hazardous Materials Table is amended by adding, in alphabetical sequence, entries for Ammunition for cannon with tear gas projectiles, Class A and B, to read as follows:

(1) *M/A	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
				(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or rail car	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
(Add)	Ammunition for cannon with tear gas projectile	Class A Explosive	Explosive A	None	173.54	Forbidden	Forbidden	6	5	
	Ammunition for cannon with tear gas projectile	Class B Explosive	Explosive B	None	173.89	Forbidden	Forbidden	1,2	3	

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

3. In § 173.54 paragraphs (a) and (b) are revised to read as follows:

§ 173.54 Ammunition for cannon.

(a) Ammunition for cannon with explosive projectiles, gas projectiles, smoke projectiles, incendiary projectiles, illuminating projectiles, or tear gas projectiles must be packed and properly secured in strong wooden or metal containers, or in plastic containers of approved military specifications complying with § 173.7 (a).

(b) Each outside package must be plainly marked "AMMUNITION FOR CANNON WITH EXPLOSIVE PROJECTILES," "AMMUNITION FOR CANNON WITH GAS PROJECTILES," "AMMUNITION FOR CANNON WITH SMOKE PROJECTILES," "AMMUNITION FOR CANNON WITH INCENDIARY PROJECTILES," "AMMUNITION FOR CANNON WITH ILLUMINATING PROJECTILES," OR "AMMUNITION FOR CANNON WITH TEAR GAS PROJECTILES, CLASS A EXPLOSIVES," as appropriate.

4. In § 173.65 paragraph (a)(3) is added and paragraph (d) is revised to read as follows:

§ 173.65 High explosives with no liquid explosive ingredient nor any chlorate.

(a) * * *

(3) Specification 17H or 37A (§§ 178.118 and 178.131 of this subchapter). Metal drums (single-trip) having a

minimum 0.003-inch thick polyethylene liner. Authorized only for ammonium perchlorate with particle size of 5 to 15 microns. Maximum capacity is 30 gallons.

(d) The following materials may be shipped dry as drugs, n.o.s., or medicines, n.o.s., by rail freight or highway if the amount in one outside package does not exceed 4 ounces, and the materials are packed in securely closed bottles or jars that are cushioned to prevent breakage:

- (1) Ammonium picrate.
- (2) Dipicrylamine.
- (3) Dipicryl sulfide.
- (4) Dinitrophenylhydrazine.
- (5) Nitroguanidine.
- (6) Picramide.
- (7) Picric acid.
- (8) Picryl chloride.
- (9) Trinitroanisole.
- (10) Trinitrobenzene.
- (11) Trinitrobenzoic acid.
- (12) Trinitro-m-cresol.
- (13) Trinitronaphthalene.
- (14) Trinitroresorcinol.
- (15) Trinitrotoluene.
- (16) Urea nitrate.
- (17) Triaminotrinittrobenzene.
- (18) Trichlorotrinittrobenzene.
- (19) Hexanitrostilbene.

5. In § 173.89 the heading and paragraphs (a) and (b) are revised to read as follows:

§ 173.89 Ammunition for cannon with empty projectiles, inertloaded projectiles, solid projectiles, tear gas projectiles, or without projectiles.

(a) Ammunition for cannon with empty projectiles, inert-loaded projectiles, solid projectiles, tear gas projectiles, or without projectiles must be well packed and properly secured in strong wooden or metal containers, or in plastic containers of approved military specifications complying with § 173.7(a).

(b) Each outside package must be plainly marked "AMMUNITION FOR CANNON WITH EMPTY PROJECTILES," "AMMUNITION FOR CANNON WITH INERT-LOADED PROJECTILES," "AMMUNITION FOR CANNON WITH SOLID PROJECTILES," "AMMUNITION FOR CANNON WITHOUT PROJECTILES," OR "AMMUNITION FOR CANNON WITH TEAR GAS PROJECTILES, CLASS B EXPLOSIVES," as appropriate.

6. In § 173.107 paragraph (d)(2) is added to read as follows:

§ 173.107 Primers, percussion caps, grenades, empty, primed, and cartridge cases, empty, primed.

(d) * * *

(2) Specification 12B (§ 178.205 of this subchapter). Fiberboard box. Caps must be packed in inside plastic cans containing not more than 100 caps each. Cans must then be packed in a chipboard box with not more than 8 such chipboard boxes packed tightly in the 12B fiberboard box. The completed package must be such that the explosion of part of the caps will not cause the explosion of any of the caps.

7. In § 173.119 paragraphs (m)(2) and (m)(8) are revised to read as follows:

3.119 Flammable liquids not specifically provided for.

(m) * * *

(2) Specification 15A, 15B, 15C, 16A, or 19A (§§ 178.168, 178.169, 178.170, 178.185, and 178.190 of this subchapter). Wooden boxes with inside containers which must be glass, earthenware, or polyethylene, not over 1-gallon capacity each. Inside containers must be cushioned with noncombustible packaging material in sufficient quantity to absorb the contents of the inner container.

(8) Specification 12P (§ 178.211 of this subchapter). Fiberboard boxes with inside specification 2U (§ 178.24 of this subchapter) polyethylene containers not over 6-gallon capacity each. Authorized only for material which will not react dangerously with or cause decomposition of polyethylene. Not authorized for transportation by air.

8. In § 173.154 paragraphs (a) (3) and (4) are added to read as follows:
§ 173.154 Flammable solids, organic peroxide solids and oxidizers not specifically provided for.

(a) * * *

(3) Specification 57 (§ 178.253 of this subchapter). Portable tanks. Tanks must have a fusible plug having a fusing temperature between 70° C and 90° C. Authorized only for dicumyl peroxide, dry a, a'-bis(t-butylperoxy) diisopropylbenzene, solid.

(4) Specification MC 303, MC 304, MC 306, MC 307, MC 311 or MC 312 (§§ 178.341, 178.342, 178.343 of this subchapter). Tank motor vehicles. Tanks must comply with § 178.340-8. Discharge valves must be located inside the tank or at a point outside the tank where the line enters or leaves the tank. The valve seat must be located inside the tank or within the welded flange, its companion flange, nozzle, or coupling. Each product discharge opening shall have a secondary closing means, remote from tank filling or discharge openings, for operation in event of fire or other accident. Tanks may have heating coils if an inorganic heating medium is used. Authorized only for sodium perchlorate or magnesium perchlorate, wet, with 10 percent or more of water, equally distributed within the cargo tank. Only specification MC 304 and MC 307 are authorized for shipment by water.

9. In § 173.157, paragraph (b) (3) is revised to read as follows:

§ 173.157 Benzoyl peroxide, chlorobenzoyl peroxide (para), cyclohexanone peroxide, dimethylhexane dihydroperoxide, lauroyl peroxide, or succinic acid peroxide, wet.

* * *

(c) Specification 12B (§ 178.205 of this subchapter). Fiberboard box with

securely closed inside plastic containers made of polyethylene film at least 0.004 inch thick. Net weight (dry weight) in each inside container may not exceed 10 pounds. Each inside container must be surrounded by asbestos or an equivalent fire-resistant cushioning material. Net weight (dry weight) in each outside box may not exceed 50 pounds.

10. In § 173.182 paragraph (c) (4) is revised to read as follows:

§ 173.182 Nitrates.

(c) * * *

(4) Specification 23G (§ 178.218 of this subchapter). Cylindrical fiberboard box. Maximum net weight not over 65 pounds.

11. In § 173.206 paragraph (a) (13) is added to read as follows:

§ 173.206 Sodium or potassium, metallic; sodium amide; sodium potassium alloys; sodium aluminum hydride; lithium metal; lithium silicon; lithium ferro silicon; lithium hydride; lithium borohydride; lithium aluminum hydride; lithium acetylacetylone diamine complex; aluminum hydride; cesium metal; rubidium metal; zirconium hydride, powdered.

(a) * * *

(13) Specification 21C (§ 178.224 of this subchapter). Fiber drums with inside hermetically sealed tin-coated steel cans with a minimum wall thickness of 0.015 inch. Not more than four spools made of non-sparking material may be packed in each inside container with not more than 2½ pounds net weight of product in each inside container. Each metal can shall be individually separated with double-faced corrugated partitions and noncombustible packaging material. Authorized only for lithium metal in ribbons.

12. In § 173.217 paragraph (a) (8) is added to read as follows:

§ 173.217 Calcium hypochlorite mixture, dry; lithium chlorite mixture, dry; mono-(trichloro) tetra-(monopotassium dichloro)-penta-s-triazinetri- one, dry; potassium dichloro-s-triazinetri- one, dry; sodium dichloro-s-triazinetri- one, dry; trichloro-s-triazinetri- one, dry.

(a) * * *

(8) Specification 12B (§ 178.205 of this subchapter). Fiberboard boxes with inside polyethylene bottles with a minimum wall thickness of 0.015 inch. Not more than 2 polyethylene bottles may be packed in one box and each bottle shall contain not more than 16 pounds net weight of commodity. Container must be such that it will not react dangerously with or be decomposed by the commodity.

13. In § 173.221 paragraph (a) (9) is revised to read as follows:

§ 173.221 Liquid organic peroxides, n.o.s., and liquid organic peroxide solutions, n.o.s.

(a) * * *

(9) Specification 12P (§ 178.211 of this subchapter). Fiberboard boxes with inside specification 2U (§ 178.24 of this subchapter) polyethylene containers not over 6-gallon capacity each. Wire staples are not authorized for assembly or closure of boxes, except when polyethylene container is completely enclosed in inside boxes free of wire staples or other projections that could cause failures.

14. In § 173.272 paragraph (i) (22) is revised to read as follows:

§ 173.272 Sulfuric acid.

(22) Specification 103A,¹ 103AW, 103CW, 105A300W, 111A60W2, 111A100-W6, or 111A100F2 (§§ 179.100, 179.101, 179.200, 179.201 of this subchapter). Tank cars. Authorized for sulfuric acid of concentrations 65.25 percent or greater, provided the corrosive effect on steel is not greater than that of 65.25 percent sulfuric acid, measured at 100°F. Tank cars used for sulfuric acid, mixed acid (nitric and sulfuric acids) (nitrating acid), and other fuming acids, may be equipped with safety vents incorporating frangible discs having a ¼-inch breather hole in their center.

The ¼-inch breather hole is not permitted in frangible discs of safety vents on oleum tank cars. Specification 103CW and 111A100W6 tank cars must have tanks constructed of type 304-L stainless steel. Bottom outlets are not authorized.

15. In § 173.306 paragraph (d) (4) is added preceding Note to read as follows:

§ 173.306 Limited quantities of compressed gases.

(d) * * *

(4) A cylinder which is part of a tire inflator system in a motor vehicle, charged with a nonliquefied, nonflammable compressed gas is excepted from the requirements of Parts 170-189 of this subchapter except:

(i) Unless otherwise authorized by the Department, each cylinder must be in compliance with one of the cylinder specifications in Part 178 and authorized for use in § 173.302 for the gas it contains;

(ii) Each cylinder must be in compliance with the filling requirements of § 173.301.

(iii) Each cylinder must be securely installed in the trunk of the motor vehicle and the valve must be protected against accidental discharge.

16. In § 173.346 paragraph (a) (12) is revised to read as follows:

¹The use of existing tanks authorized but new construction not authorized.

§ 173.346 Poison B liquids not specifically provided for.

(a) * * *

(12) Specifications MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311 or MC 312 (§§ 178.341, 178.342, 178.343 of this subchapter). Tank motor vehicles. Tank motor vehicles designed and constructed to Specification MC 304 or MC 307 except for bottom outlets equipped with external ball valves may be used only for toluene diisocyanate.

17. In § 173.850 paragraph (a) (7) is added to read as follows:

§ 173.850 Lime, unslaked; quicklime; and calcium oxide.

(a) * * *

(7) Sift-proof bulk freight container with net weight not over 40,000 pounds.

18. § 173.1025 is amended to read as follows:

§ 173.1025 Metal borings, shavings, turnings or cuttings.

Metal borings, shavings, turnings, or cuttings, when offered for transportation by water, must be prepared for shipment in compliance with § 173.510 and must be packaged in a metal barrel or drum, or, for non-ferrous material only, in compressed bales wrapped in burlap provided the burlap shows no sign of oil, or plastic lined freight containers. Freight containers with open tops must have lading protected from weather and water and the lading must be at or below 150° F. when loaded.

PART 176—CARRIAGE BY VESSEL

19. In § 176.80 paragraph (b) is revised to read as follows:

§ 176.80 Application.

(b) Hazardous materials in limited quantities when loaded in transport vehicles and freight containers are excepted from the segregation requirements of this subpart and any additional segregation specified in this subchapter for transportation by vessel.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53(e).)

NOTE.—The Materials Transportation Bureau has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Statement under Executive Order 11821 and OMB Circular A-107.

Issued in Washington, D.C. on October 31, 1977.

JOHN J. FEARNSIDES,
Acting Director.

Materials Transportation Bureau.
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